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ABSTRACT

The purpose of this paper is to develop the framework for a teaching methodology based on the concept of experience, especially as that concept has been defined by John Dewey. The discussion is divided into three parts and the first section provides a summation and analysis of behavioral objectives (the current methodology). It is stressed that behavioral objectives assume that ends should be separated from means and determined prior to the activity of learning and that it is the teacher, but never the student, who determines the ends. In the second section a comparison is made of results produced when ends are separated from, as opposed to conjoined with, means. The third section provides the outline for the new methodology. The key ingredient on a philosophical level is the distinction Dewey makes between ends in themselves and ends in view. The latter arise out of activity and act as hypotheses to direct but not control activity, while the former are determined before activity and thus provide the very limits for activity. On the educational level the key ingredient is that education be a process of the student determining his own goals and receiving the results of his own planning. (Author/RSM)

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A METHODOLOGY OF EXPERIENCE: AN ALTERNATIVE TO BEHAVIORAL OBJECTIVES

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BEHAVIORAL OBJECTIVES

During the decade just ended, the 1960's behavioral objectives has probably been the most talked about subject in curriculum theory. In the early sixties it was common--with the advent of programmed instruction--to see such objectives as yet another panacea for America's educational ills. However, in a few years there appeared a number of critics questioning both its theory and practice. Today it is usual for symposia, journals, etc. to present the case in a pro-con format; in short, the bloom of enthusiasm has worn off, leaving for substance an unresolved but intriguing issue. That issue, simply put, is whether or not educational objectives should be framed exclusively, or even primarily, in behavioral terms. Behind this, of course, is another question, whether or not education itself should be goal oriented. The first question is concerned with the yea or nay of framing objectives behaviorally; the second, with objectives themselves.

One of the advantages advocated by those who favor behavioral objectives is that such a framework is more beneficial to both the student and the teacher by focusing attention on the learner's performance rather than on the teacher's. As Popham (1969) says:

> ... precise objectives stated in terms of measurable learner behavior make it infinitely easier for the teacher to engage in curricular decisions. The clarity of precisely stated goals permits the teacher to make far more

> judicious choices regarding what ought to be in the curriculum (Popham, 1969, p. 40).

Not only does this quote assume (probably validly) that there is a certain amount of precision gained by framing objectives behaviorally, but it also assumes, tacitly but definitely, that the whole notion of objectives implies pre-determined and externally imposed ends--it being the teacher who determines "what ought to be in the curricum." In fact I believe it fair to say, and shortly will attempt to prove, that behavioral objectives is a sub-category of the rather general notion that the process of education is best affected when means are separated from ends. It is this larger concept which is of interest to me; that is the idea of objectives themselves, regardless of the various adjectives attached, i.e., educational, instructional, behavioral.

Although the phrase "behavioral objectives" is itself rather new--having obtained popularity only in the past two decades--many of its basic aspects are as old as education itself. In terms of twentieth century American education it is possible to find many of today's ideas operant in the writings of such pre-1930 authors as Bobbitt, Bode, Pressey. In terms of manifestations of behavior there is a tradition which goes back to the turn of the century and the "new psychology" of Watson, Thorndike and Judd. Finally the writings of Ralph Tyler span a period of forty plus years. Thus behavioral objectives does have a history and while Eisner (1967) has done a good

job in beginning to uncover it much work needs to be done. However, such an approach is not the one of this paper. To the extent that this paper is concerned with an historical focus on behavioral objectives it is from the year 1950 when Tyler published the syllabus for his course Education 360--Basic Principles of Curriculum and Instruction.

This work, somewhat a landmark in its field--at least to the extent that it has served as a focal point for all subsequent proponents (and opponents) of behavioral objectives--is basically:

> A rationale for viewing, analyzing and interpreting the curriculum and instructional program of an educational institution (page 1).

Toward this end Tyler's rationale is concerned with providing answers to "four fundamental questions":

1. What goals should a school seek?
2. What means should it use?
3. How should these means be organized?
4. How should the effectiveness of these means be evaluated?

A glance at these four shows three of them to be concerned with means and one with ends. Actually this is a bit misleading, for the first question is more concerned with how a school goes about choosing its goals than with the statement of what specific goals are in a school's best interests. As Tyler says, "in the final analysis objectives are a matter of choice," choice of the teachers, the administrators, the program developers--of "those responsible for the school" (page 3)--but not of the students. To be prepared for this

choice Tyler thinks the curriculum developer should be informed about the various alternative viewpoints of progressive and essentialist education as well as with various psychological, philosophical and sociological theories of man. However, he has no preference for any specific one of these theories over another. Rather Tyler is concerned with the way the chosen goal is framed; his commitment is to framing all goals behaviorally.

> Objectives are sometimes stated as things which the instructor is to do ...but they are not really statements of educational ends. Since the real purpose of education is not to have the instructor perform certain activities to bring about significant changes in the students' patterns of behavior, it becomes important to recognize that any statement of the objectives of the school should be a statement of changes to take place in students (page 28).

Thus it can be seen that Tyler's monograph on the basic principles of curriculum and instruction is essentially a monograph on methods of implementing objectives already chosen. Within this methodology there are two assumptions operating. The first is that all education must be goal oriented; the second is that goals expressed in a behavioral manner can be more efficiently implemented than those expressed in other manners. As can be seen from the last quote this second assumption is one for which Tyler offers some support; namely, that objectives framed behaviorally are easier to evaluate, allow for individual differentiation, for more precise and specific formulation, and finally emphasize learning more than

teaching. However, the first assumption, although prominent, is not supported. Tyler begins his monograph, on page three, with a lament that "many educational programs do not have clearly defined purposes," and then goes on to assert that while an unusual teacher may "do excellent educational work" without a "clear conception of goals" such goals are a prerequisite for any curriculum which is to be planned "systematically and intelligently." Beyond this assertion no further support for his position is given, the logic and inherent rationality of the position being simply assumed. A close reading of the monograph though reveals a key element in the assumption; namely, that ends are to be pre-determined. In talking of the Deweyan idea of a learning experience as the resulting interaction between the learner and the external environment, Tyler says:

> The teacher can provide an educational experience through setting up an environment and structuring the situation so as to stimulate the desired type of reaction (page 41, underlining mine).

Ironically this last quote is very non-Deweyan for it places the ends of the activity prior to and outside the activity itself. It is this separation of means from ends which forms the central focus of my criticism of behavioral objectives, while it is the integration of means with ends which will form the focus of my methodology of experience. However, before going to to those sections of this paper I would first like to make some overall comments on the pro's and con's of behavioral objectives as each has developed in the

literature.

Essentially it can be said that four categories of people could benefit from a behavioral approach: curriculum theorists, curriculum developers, teachers and students. The theorists benefit by being able to approach education in a more systematic and planned manner, constructing taxonomies and hierarchies of learning. The taxonomies of Bloom (1956) and Krathwohl (1964) as well as the structured hierarchy of Gagne (1965) are evidence of this trend. The developers of curriculum benefit from the "systems" approach, whereby feedback, testing and measurement all become important. The work of Mager (1962) and Popham (1967) is illustrative of this trend. The teacher benefits by being able to integrate objectives with instruction more precisely than was possible before. She, or he, is also able to individualize the instructional program with varied objectives for each learner. The use of programmed instruction is illustration of this trend. Finally there is the student. It is assumed he will learn better (and more) when informed as to the goals desired of and for him. As Krathwohl says (1965): "Students tend to concentrate on what counts ..." If the student is informed ahead of time as to "what counts" then indeed he can, and it is hoped he will, concentrate better. At least his focus will be narrowed.

This statement by Krathwohl and similar ones by Popham (1969) and Tyler (1964)--all concerned with advantages to the student of his

being pre-informed as to the goals and results expected of him--warrant further attention. First of all the notion of the student being able to make an active contribution to the process of selecting objectives is almost totally absent prior to the mid 1960's; and even in the three works just cited the idea of a "student point of view" is most minimal, as well as new. Second the consideration given to the student--and certainly behavioral objectives, especially in the writings of Ralph Tyler, has given a lot of consideration to the student--has been more negatively than positively oriented; that is, his contribution to the theory of behavioral objectives has been mostly through his lacks, needs, wants or gaps. As Tyler says: the use of the word need often,

> ... represents a gap between some conception of a desirable norm, that is, some standard of philosophic value, and the actual status (Tyler, 1950, page 6).

Therefore in determining behavioral goals it is first necessary to find "the present status of the students," and then compare that status "to acceptable norms in order to identify the gaps or needs." Third the student's role in the actual carrying out of the objectives has been more that of passive receiver than of active creator; that is the student has been expected to receive habits, training, enculturation, and indoctrination before he is considered to have a valid point of view or be allowed to function as an active agent.

One educator, William Estes, has labeled the above as "the

shoehorn concept of learning"; while John Dewey has emphasized the static view of knowledge such a concept implies; and Herbert Kliebard has pointed out that while educators might have been willing to accept such a view of, and role for, students in the 1950's it is hard to see them making the same acceptances in the 1970's. For myself I am reminded of Arthur Lovejoy's observation that virtually all past systems, social, political, educational (Lovejoy pays particular attention to the founding of the American Constitution) have been predicated on the assumption that man's human nature is essentially evil. Given the opportunity to be his own person man will inevitably and predictably cause chaos and holocaust. The traditional way to overcome this Augustinian and Calvinistic view of man's nature has been to: (1) indoctrinate man from an early age on, (2) submit him to the guidance of those who are "right," or more knowledgeable, (3) create systems of government and structures of life where controls and checks prevent him from being his own agent, or in modern terminology from "doing his own thing." Evidence that this view of human nature is still active in modern day society can be found fictionally in William Golding's Lord of the Flies and factually in Herbert Kohl's Thirty-Six Children. While it would be absurd to say that behavioral objectivists hold such a view of human nature it is possible to find marked similarities between this view and the attitude objectivists display towards student

points of view. The attempt here is not to find a nefarious, and not so subtle, way of discrediting behavioral objectives and objectivists, but rather to call attention to the point that Eisner has recently been making; namely that there is a definite, if tacit, connection between behavioral objectives and historically established philosophies--both of education and of man. Those connections need to be explored, by the behavioral objectivists and by others. The next section on means and ends will attempt to explore one such connection.

To those who find behavioral objectives objectionable (and by now it's obvious I must be classified in that group) one of the most common specific criticisms raised is that of manipulation. The argument runs that the more a methodology is designed to produce specified forms of behavior then the more is that methodology advocating manipulation. As Arnstine (1964) has pointed out in his article on programmed instruction--the catalyst which threw behavioral objectives into such prominence--the manipulation of people is not only contrary to American ideals about the way a democratic society should function, but is also contrary to the accepted notion of the way education should function within such a society. As he says:

> If this (the shaping of human beings to predetermined ends) were really the way in which Americans wanted their children to be educated, then this nation would be indistinguishable from any other totalitarian society (Arnstine, 1964, pages 338-339, words in parentheses a paraphrase).

A second objection, similar to the first and arising from it, is a much harder one to focus. It can be found in Bruner's statement (1961) that the art and technique of inquiry can be developed only by engaging in inquiry; in McDonald's statement (1965) that objectives can be known in any real sense only after completion of the act of instruction; and in Eisner's point (1967) that the pre-determination of objectives ignores the very heart of the interactive process, namely the continual grouping and re-grouping of elements within both the environment and the learner. I would like to frame all of these statements within the general structure Dewey develops concerning the logical and psychological organization of subject matter. The former is the organization of relationships within a discipline and between discipline into as structured, ordered and logical a manner as can be devised at any given time. The latter is the organization that exists between these logical relationships and the individual's own thought constructs. As Dewey says:

> There is a strong temptation to assume that presenting subject matter in its perfected form provides a royal road to learning (Dewey, 1916, page 220).

This is the difficulty with programmed instruction, or even with textbook instruction. However, there is also another temptation for all goal-oriented educators and that is to assume that the psychological organization can be done, or made more efficient, if one individual does it for another. But the very nature of the concept

requires that the individual do his own organizing. Not only is there no royal road to learning, neither are there maps which the individual must merely memorize.

What is at issue here, of course, is a concept of education which is different from mere training, a concept of education which is based upon man's unique powers of consciousness, reflection, symbol manipulation and the like. The challenge then, to those who hold this concept of education, is to devise an educational methodology which is based on the individual's own assimilation of experience but which will not prescribe what those experiences are to be; a methodology which will have within it relationships between the logical and the psychological, but which will not impose the former on the latter. This is what the methodology of experience I am to propose later is designed to do; but first I would like to devote a section to means and ends, for it seems to me that this is the very heart of the behavioral objectives controversy and also the origin from which any new methodology must emerge.

ENDS AND MEANS

Behavioral objectivists feel, as Popham (1969) has pointed out, that ends should be separated from means in as clear and distinct a manner as possible. Further they see the two as having quite different functions within an educational system, and see the success of

that system lying in the clear, specific and behavioral description of those functions. Many of the quotes already given provide support for the foregoing statements, but for emphasis a few more will be given here:

> It would seem obvious that ends must be specified if any appropriate choice is to be made of means (Louise Tyler, 1969, page 100).
>
> ... the determination of what the instructional goals should be is essentially a curricular, not an instructional, decision. The purpose of goal-referenced instructional models is to achieve more efficiently whatever goals have been selected (Popham, 1969, page 38).
>
> All aspects of the educational program are really means to accomplish basic educational purposes (Ralph Tyler, page 3).
>
> When one specifies explicit ends for an instructional program there is no necessary implication that the means to achieve those ends are also specified (Popham, 1969, page 47).

In all of these quotes there is either an explicit or tacit assumption that ends should be separated from means and determined prior to any decision about means. As Louise Tyler (1969) says there is a basic need to prespecify objectives, a need which by its very rationality seems obvious. In fact it seems so obvious--as Robert Guttchen has pointed out in his article on Dewey's differences with Mill over the separation of means from ends--that we naturally assume the categories of means and ends to answer not only a genuine psychological need, but also to lie "at the core of any notion of rational as well as moral activity."

> What could be more common and commonplace than the idea that men seek ends and that when they go about this rationally, they draw upon their best knowledge so that the means that they use will be most likely to assure success? (Guttchen, 1969, page 28).

John Stuart Mill felt the logic of this position to be obvious and devoted the last chapter of his sixth book on A System of Logic to its exposition. The heart of this "Mill model" on the separation of ends from means lies in the following paragraph:

> The relation in which rules of art stand to doctrines of science may be thus characterized. The art proposes to itself an end to be attained, defines the end, and hands it over to the science. The science receives it, considers it as a phenomenon or effect to be studied, and having investigated its causes and conditions, sends it back to art with a theorem of the combination of circumstances by which it could be produced. Art then examines these combinations of circumstances, and according as any of them are or are not in human power, pronounces the end attainable or not. The only one of the premises, therefore, which Art supplies is the original major premise, which asserts that the attainment of the given end is desirable. Science then lends to Art the proposition (obtained by a series of inductions or of deductions) that the performance of certain actions will attain the end. From these premises Art concludes that the performance of these actions is desirable, and finding it also practicable, converts the theorem into a rule or precept (Mill, 1843, 1965, pages 139-140, underlining mine).

Bypassing for the moment the difficulties of style and wording[1] the

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[1]For Mill Art is basically modes of action--practical action--while Science is modes of logical organization, or categories, or principles. Thus Mill says: "Art in general consists of the truths

main ideas of Mill can be expressed sequentially as follows:

1. Art proposes an end;
2. Science supplies a formulation of means;
3. Art judges the means practicable or not;
4. If practicable, Art converts the formulation into a rule of action.

Just how strong a separation Mill envisioned between means and ends becomes evident a few pages later when he says:

> But though the reasonings which connect the end or purpose of every art with its means belong to the domain of Science, the definition of the end itself belongs exclusively to Art, and forms its peculiar province (page 144).

One of the difficulties with such a separation is that it puts the ends, to use Mill's phrase, in "a class by themselves"; it separates the "ought" proposition from the "will" propositions and removes the former from all empirical validation. Thus the ends, the very basis of the whole structure, are often no more than mere personal preferences and unassailable by the empirical evidence accumulated; for such evidence deals strictly with the means, not with the ends. This problem has been recognized by both Tyler and Mill, and each has attempted the same solution. Mill says (page 145) that

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of science, arranged in the most convenient order for practice, instead of the order which is the most convenient for thought. Science groups and arranges its truths so as to enable us to take in at one view as much as possible of the general order of the universe. Art, though it must assume the same general laws, follows them only into such of their detailed consequences as have led to the formation of rules of conduct ..." (page 143).

everyone framing ends must be prepared to justify his approbation in terms of "general premises," which general premises form the Doctrine of Ends and are universally recognized by all rational men. Tyler (pages 3-6) recognizes that "in the final analysis objectives are matters of choice," but also believes that certain "acceptable norms" exist. However, as Kliebard (1970) has pointed out this phrase masks a very elusive concept: just what are these norms, and to whom are they acceptable? Much the same sort of analysis can be made of other behavioral objectivists. In fact, in general the removing of ends to a separate class by themselves gives to these ends a special status since they are now no longer required to prove themselves in the arena of justifiability. Often such categorization serves as a shield behind which exists an individual's most cherished, unexamined and unproven prejudices.

However, the exclusive status of ends is not the main objection Guttchen or Dewey would bring to the Mill model; their prime objection centers around the very rationality of the model. As Guttchen says (pages 29-42):

> [That] the bright lights of rationality and moral action shine where ends are clear and means are well chosen ... [is] one of the grandest over-simplifications that men, as well as most philosophers, have ever entertained.

The rationality of clear ends and distinct means is really an ex post facto rationality; it is the result of a construct man has placed upon his completed actions as a simplification of what he would have liked

those actions to have been. There is in such a construct all the logical value a simple and idealized structure has; but as an account of how man psychologically approaches, or even frames, problems it is woefully inadequate. Individuals--at all levels of intellectuality--approach their problems much more in the manner of a man stumbling (sometimes quite skillfully) "from pillar to post," than in the manner of a man working "with a clear blue-print in hand." Modern philosophers of science such as Thomas Kuhn, Michael Polanyi and Stephen Toulmin have, in recent decades, been emphasizing this same point in regards to the work of scientists. They say that intuition, imagination, perseverance, commitment to another field or idea, and in-depth knowledge of at least two fields are some of the characteristics of those who make scientific advances. Bruner, of course, made such thinking quite central to his argumentation in The Process of Education.

In the above there is a strong resemblance to what Eisner has been saying about teachers' not using educational objectives. This fact may mean that the objectives have not been clearly enough defined, as the objectivists would argue; but it may also mean that objectives themselves are not useful devices for planning action. As Eisner says--following McDonald:

> The ends achieved are not preconceived but reflected upon in retrospect rather than in prospect. This, I believe, is what most teachers do in the process of curriculum development and what I suspect most of those reading this article do (Eisner, 1967b, page 279).

There is also a strong similarity with Kliebard's query that:

> One wonders whether the long-standing insistence by curriculum theorists that the first step in making a curriculum be the specification of objectives has any merit whatsoever (Kliebard, 1970, pages 269-270).

Kliebard makes this query because while he realizes the key to Ralph Tyler and behavioral objectivists in general is the clear formation of objectives, he also realizes that Tyler's elaborate scheme for determining objectives is really no more than an assertion that objectives ultimately originate in value positions. This is, of course, to say so little about the process of selecting objectives, especially when there are a variety of value positions, as to be virtually meaningless.

The issue in contention here is that of objectives themselves. In the history of Western thought there has been the long standing tradition that the goals and purposes of man's activity must lie outside that activity; that life itself is a preparation for something else. Around this "something else" there has existed a halo of rationality, clarity, definiteness, intellectuality and abstractness; in fact these qualities might be said to define the limits of the theoretical as opposed to the practical. Educationally this has meant that goals and ends have been pre-determined, either by God for his subjects, or by the priest for his people, or by the teacher for his students. Within this framework ends are drastically separated from means; they are, as Guttchen has said and as Mill has

demonstrated, in a class by themselves. However, there are a number of people in a number of fields who are quite dissatisfied with this general framework. For them ends need to be brought into a closer and more integrative relationship with means. Thus in the writings of Eisner, Kliebard, Kuhn, McDonald, Toulmin, etc. one can see echoes of the model Dewey proposed as an alternative to Mill.

The Dewey model, such as it may be--for Dewey's ideas on ends and means have not received the attention Mill's have, and hence don't warrant the label "model"--is probably best expressed in the following quote from Human Nature and Conduct:

> Our problem now concerns the nature of ends, that is ends-in-view or aims. The essential elements in the problem have already been stated. It has been pointed out that the ends, objectives, of conduct are those foreseen consequences which influence present deliberation and which finally bring it to rest by furnishing an adequate stimulus to overt action. Consequently ends arise and function within action. They are not, as current theories too often imply, things lying beyond activity at which the latter is directed. They are not strictly speaking ends or termini of action at all. They are terminals of deliberation, and so turning points in activity (page 207).

Dewey then goes on to say that many theorists agree in placing ends beyond human activity, even though they disagree as to what those ends are. Hence many critics of Mill and the utilitarians while denying pleasure as the "outside and beyond" goal, nevertheless feel it necessary to have some goal "to induce action" and in which action will terminate. This, of course, is reminiscent of Tyler and other

behavioral objectivists who proclaim the value of such outside and beyond goals, but side-step the issue of what those goals are, or should be.

The problem, as Dewey sees it and as can be determined from the above quote, revolves around the distinction between ends-in-themselves and ends-in-view. The ends-in-themselves (or fixed ends) view assumes that ends are separate from, and both prior and superior to, means. Thus "the relation of ends-means is unilateral, proceeding exclusively from end to means." This means that all aims or purposes are directed and controlled by the end, with only those aims that coincide with the end having any validity. Such a concept of activity gives the teacher, or the program planner, a certain moral superiority that the participator in the activity never can have. Further, Dewey says the setting up of prior ends, with the justification of action as a means to that end, leads to narrowness. It leads to narrowness because:

> Fixed and separate ends reflect a projection of our own fixed and non-interacting compartmental habits. We see only consequences which correspond to our habitual courses (page 215).

Dewey then goes on to give the example of generation after generation of people being shown targets which they had no part in constructing, and being continually urged to shoot; they would eventually gather the notion that "the targets existed in order that men might be forced to be active." But activity (including learning as well as

throwing or shooting) is natural to man; the targets (varying from generation to generation, or from individual to individual) are constructed and placed by man in order that he can do his activity better. Thus ends are "turning points in activity," not termini of activity.

Finally Dewey says that the doctrine of fixed or pre-determined ends: (1) diverts attention from the examination of consequences, and (2) hinders the intelligent creation of purpose. It does the former by emphasizing, not the ends themselves, but the degree of efficiency with which the ends are achieved. In short, the correlation is between the ends and the means, not between the ends and their consequences. In regards to the second point--the intelligent creation of purpose--Dewey says that such creation can occur only when the individual has the opportunity to formulate his own purposes, act upon that formulation, and receive the consequences thereof. But a fixed ends approach emphasizes not the process of creation, but rather the product.

All of this is reminiscent (to me at least) of Guttchen's point that the Mill model is essentially a production--or thing--oriented one; of R. S. Peters' remark that to be educated is not to have arrived at a certain place, but "to travel with a different view"; and of Eisner's distinction between defining an objective and establishing a direction. Dewey's ends-in-view framework, of course, is designed to do the latter. Ends in this sense arise out of natural

effects or consequences: they are the result of acts which at first are just hit or stumbled upon, but which upon reflection are desired for themselves. Thus ends become projected or probable consequences, not removed from the activity in question, but turning points in that activity. As Dewey says:

> Men shoot and throw. At first this is done as an 'instinctive' or natural reaction to some situation. The result when it is observed gives new meaning to the activity. Henceforth men in shooting think of it in terms of its outcome; they act intelligently or have an end. Liking the activity ... they not only 'take aim' ... but they find or make targets at which to aim. This is the origin and nature of 'goals' of action. They are ways of defining and deepening the meaning of activity. Having an end or aim is thus characteristic of <u>present</u> activity.

For Dewey ends are quite different, and serve a very different function than for Mill. Whereas Mill sees ends existing outside activity, Dewey's idea of ends as turning points in activity places them integrally within the continuum of human experience. To develop these ideas in a model then it is necessary first to explicate Dewey's concept of experience, for it is within this framework that he places his famous dictum that all ends are but means to further ends.

A METHODOLOGY OF EXPERIENCE

Simply stated, Dewey's theory of experience is that in all ordinary occurrences there is a certain quality which pervades the

situation, and which the individual first becomes cognizant of in a non-cognitive manner. That is, the immediate or primary qualities of an experience are felt or had; they are not intellectualized. However, reflection is itself a natural trait and once the quality becomes felt it is also then the subject for analysis and scrutiny. This cognitive aspect of an experience is what adds depth and meaning to the experience, transforming the situation from a mere occurrence to an experience--in the sense of "Have I just had an experience!"--and also laying the foundation for an increased quality when a new, but similar, experience occurs. Thus a man sipping wine first has a sensory awareness of the experience, either liking or disliking it. After reflection, analysis, comparison and repeated tastings new meaning is infused into the original experience. When he next tastes a similar wine--no experience had can be exactly re-had--the quality of that experience will be greater than the quality of the previous experience.

In a sense this theory of experience is Dewey's complete cosmology; that is, his philosophy, his psychology, his educational and social theory can all be placed within this framework. Educationally this means there is no end to education beyond itself, no purpose to growth other than more growth, and every end itself becomes a means to a further end. Dewey illustrates this in his chapter on "Aims in Education," wherein he describes his own conception of aims, as well as his differences with the Mill model.

He says:

> ... the aim of education is to enable individuals to continue their education--or that the object and reward of learning is continued capacity for growth ... we are not concerned, therefore, with finding an end outside of the educative process to which education is subordinate. Our whole conception forbids. We are concerned with the contrast which exists when aims belong within the process in which they operate and when they are set up from without (Dewey, 1916, page 100).

When the latter occurs--when aims are predetermined and by others--then some (notably the student or learner) will find their aims "determined by an external dictation," and existing as a "means to more ulterior ends of others." However, when they are not set up from without then "they arise from the free growth of the individual's own experience," and can truly be called personal.

For Dewey this point about the learner formulating his own ends or aims is a very key one; it not only lies at the heart of his subordination of teaching to learning (that is, more emphasis on the psychological than the logical) but it also lies at the heart of his concept of experience. Dewey sees learning as a natural and important by-product of human activity; as such it is the activity, not the learning, which provides the basic framework. If the human is naturally inquisitive, reflective and organizing then the emphasis in education should be on the patterns of inquiry, reflection and organization, not on the products. Production, knowledge, learning are but by-products of the active process of inquiry; and this

process of inquiry, since it is natural, cannot efficiently and should not morally be determined by one for another. As Dewey says:

> From one angle, almost everything I have written is a commentary on the fact that situations are immediate in their direct occurrence, and mediating, and mediated in the temporal continuum constituting life-experience. I have pointed out that one person cannot communicate an experience as immediate to another person. He can only invite that other person to institute the conditions by which the person himself will have that kind of situation the conditions for which are stated in discourse. Even if this difficulty condition is fulfilled, there is no assurance that any one will so act as to have the experience. The horse led to water is not forced to drink (Dewey, 1939, page 540.

A system of education, then, based on an individual's personal experience should be one which allows the individual the opportunity to develop freely those experiences within a social context. This last phrase--develop those experiences within a social context--is most important, for experiences do need to be developed: they do not come into existence full-blown, and they do not receive meaning in isolation from other people. The development of experience requires dialogue and discussion.

The challenge then is in creating an educational structure wherein each individual can develop his own experiences. This structure should not be so rigid and pre-planned that the individual has little chance to do his own development, but neither should it be so loose and flexible that development is not en-

couraged. In regards to the evils of a rigid structure Dewey has this to say:

> The vice of externally imposed ends has deep roots. Teachers receive them from superior authorities; these authorities accept them from what is current in the community. The teachers impose them upon children. As a first consequence, the intelligence of the teacher is not free; it is confined to receiving aims laid down from above. Too rarely is the individual teacher so free from the dictation of authoritative supervisor, textbooks on methods, prescribed courses of study, etc., that he can let his mind come to close quarters with the pupil's mind and the subject matter. This distrust of the teacher's experience is then reflected in lack of confidence in the responses of pupils. The latter receive their aims through a double or treble external imposition, and are constantly confused by the conflict between the aims which are natural to their own experience at the time and those in which they are taught to acquiesce. Until the democratic criterion of the intrinsic significance of every growing experience is recognized, we shall be intellectually confused by the demand for adaption to external aims (Dewey, 1916, pages 108-109, underlinings mine).

In regards to setting up a structure which allows, and encourages, development from within, Dewey, of course, favors the scientific method or what he called the creative use of intelligence. This is essentially the formulation of hypotheses, the observation of results produced in the light of those hypotheses, and the reformulation of other hypotheses. Within this procedure the consideration of probable consequences in relation to those actually produced, and the consideration of various alternatives are both very important.

The individual learns not merely by planning, but by checking the plans made with the results produced; and a variety of alternatives not only gives a better base for comparison but also makes unexpected but often needed readjustments possible. Again as Dewey says--in a very Schwabian type of phrase:

> Where only a single outcome has been thought of ... one only steams ahead toward the mark. Sometimes such a narrow course may be effective. But if unexpected difficulties offer themselves, one has not as many resources at command ... (page 103).

The foregoing remarks about creating educational procedures based on the development of experience where ends arise within the activity, and where actual consequences are continually being checked with planned or probable consequences brings to mind Thomas Kuhn's observations about the nature of science. Kuhn, in his book The Structure of Scientific Revolutions, points out that textbooks present the progress of science as orderly and cumulative; that is, one disclosure leads inevitably and logically to the next. However, Kuhn says, such an ordering is an ex post facto ordering and in reality scientific progress is a very halting and stumbling thing, filled with periods of crisis and doubt, and finally based more on personal commitment than on any other one factor. The prime example Kuhn gives is of Copernicus' commitment to the harmony and beauty of neo-Platonic mathematics. According to this commitment the epicycles of Ptolemy were too unharmonious to be real, and so Copernicus made

other postulates--notably a moving earth and a stable sun. Copernicus' immediate successor, Kepler, shared his commitment but those who next followed were far more interested in the results of Copernicus' and Kepler's theories than in the commitments which caused those theories to come into being. Thus they took these original ideas and tested them under a tremendous variety of circumstances. In these testings the original theories were changed, modified, altered and continually reworked. It is in this stage, between Galileo and Newton, when an idea was accepted but also tested under new and novel circumstances that Copernican astronomy made its biggest advances. The point that Kuhn makes from this is that science makes progress <u>from</u>, but not necessarily <u>toward</u>.

> The developmental process described in this essay has been a process of evolution <u>from</u> primitive beginnings--a process whose successive stages are characterized by an increasingly detailed and refined understanding of nature. But nothing that has been or will be said makes it a process of evolution <u>toward</u> anything (page 169).

This idea could easily be applied to Dewey's concept of personal experiences. Growth in such experiences proceeds from commitment out into the complexities of the subject being studied: a move not toward a pre-determined goal but from the simple to the complex, from the gross to the refined, from the psychological to the logical. This, however, is not the method of the Mill model nor of behavioral objectives. The teaching of subtraction to elementary school children can be taken as a case in point. There the usual method is for the teacher,

or textbook writer, to choose a particular way and then have the child drilled in as many examples as possible. But it would be possible for the child to devise his own method and then test that method in a variety of cases. Over a number of years--say second grade through fifth--the class, or individuals, would develop a number of methods, each one applicable to certain cases, but no one universally satisfactory. Indeed this is just the case: in a decimal system no one method of subtraction works efficiently in all cases: ones, zeroes and nines all cause troubles. Here the student would not only give a facility with subtraction, but he would also gain insight into the logical complexities of algebra and number theory, all through the development of his own experiences. The same case can be made for the reorganization of those studies such as literature, composition and history which involve a greater reliance on value-judgment. In place of wrong answer difficulties, one could substitute peer group opinion and consensus. All of this is a fine lead into Schwab.

In his most recent writings, notably College Curriculum and Student Protest (1969) and The Practical: A Language for Curriculum (1970), Schwab has been advocating the development of college curricula in accord with the structure of the practical rather than with the structure of the theoretical. The Deweyan distinction is essentially a plea for making active, particular problems the center of inquiry rather than the "construction of taxonomies," "pursuit of global principles," and "search for stable sequences."

Schwag shares with Dewey a basic distrust of the theoretical as an ex post facto reconstruction; hence, although such a reconstruction is logical and orderly, it is also quite irrelevant to the actual processes of inquiry that brought about the result. As Schwab says:

> The subject matter of the theoretic is always something taken to be universal or extensive or pervasive and is investigated as if it were constant from instance to instance and impervious to changing circumstances. The most obvious examples are: mass, equivalence, time, igneous rock, homo sapiens, electrons etc. The subject matter of the practical, on the other hand, is always something taken as concrete and particular and treated as indefinitely susceptible to circumstance, and therefore highly liable to unexpected change: this student, in that school, on the South Side of Columbus, during the mayorality of Ed Tweed etc. ... This is to say that theoretic problems are states of mind. Practical problems, on the other hand, arise from states of affairs in relation to ourselves (1969, page 3).

Schwab would like to make all education--especially formal schooling--practical in the sense of dealing with these particular and personal states of affairs. However, he--again like Dewey--does not see the immediate experiences of the student as valuable without development.

The method of development he advocates is that of putting the student in very direct contact with the problems and practices within a field. Towards this end he advocates that students sit in (listening en mass) on faculty meetings, board of directors meetings, scholarly seminars, etc. He advocates that they be given varying degress of responsibility--including heading committees, marking

papers, drawing up courses, etc.--and be required to experience the results of the actions they take; their responsibilities should be neither sham nor token. Finally he advocates that their courses be structured so that they come into contact in a personal manner with conflict, compromise and complexity. What Schwab wants to do here is create a sense of community where ideas and personality will come into open conflict, but where compromise will also emerge; this he feels can be accomplished if education divorces itself from rigid principles and deals eclectically with particular problems. Once students realize the complexity of problems and once administrators and faculty are held accountable to the general community for both their actions and their stated thoughts then Schwab believes such compromise will become natural. More importantly Schwab believes compromise, that is community participation and decision, to be the essential ingredients in future social progress.

Throughout all of Schwab there is a definite emphasis on education (schooling) as the development of experience, not as the place or means by which information gets transferred from one to another. In fact information itself is but a means to practical decision making; and hence education should be so structured that decisions can grow from personal and practical experiences. Within such a concept of education ends cannot be imposed from the outside but indeed must emerge from the actual process of decision making.

SUMMARY AND CONCLUSION

In this paper I first analyzed some of the issues surrounding behavioral objectives and then placed that analysis and the issues involved within the larger framework of ends separated from means (the Mill model). While there is a rather natural rationality to this model Dewey showed deficiencies in it and presented another model, that of ends arising from within activity. I then used this framework of Dewey's to develop an alternative to behavioral objectives, an alternative in which the goals, activities and behaviors of the student are not determined <u>for</u> him, but rather <u>by</u> him. In this model it is the process of experiencing, in the sense of both doing and receiving the results of doing, which becomes focal.

Indeed there needs to be more work done on this model than I have presented here. For one thing Dewey's concept of inquiry and his theory of knowledge are both important, but too complex for this paper; for another a more detailed study of ends and means needs to be undertaken; and for a third there needs to be developed a stronger connection between Dewey's concept of experience and the theories of modern philosophers of science. However, it appears to me that even with these projects unfinished it is possible to see within this paper the outlines of a very real and very viable alternative to behavioral objectives. If a new era in curriculum is to occur, it may well be along the lines presented here.

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